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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,623	03/17/2004	Alok Kumar Srivastava	OI7030492001	5813
23639 7590 05/18/2007 BINGHAM MCCUTCHEN LLP Three Embarcadero Center San Francisco, CA 94111-4067			EXAMINER NGUYEN, PHILLIP H	
			ART UNIT 2191	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/803,623

**Applicant(s)**

SRIVASTAVA ET AL.

**Examiner**

Phillip H. Nguyen

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is in response to the original filing of March 17, 2004. Claims 1-35 are pending and have been considered below.

#### ***Note:***

2. Applicant appears to be attempted to invoke 35 U.S.C. 112 6<sup>th</sup> paragraph in claims 32 and 34 by using "means plus function" language. However, Examiner notes that the only "means" for performing these cited functions in the specification appears to be software. Since no other specific structural limitations are disclosed in the specification, the claims have not invoked 35 U.S.C. 112 6<sup>th</sup> paragraph when considered below.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 32-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- Regarding claims 32 and 34 recite a system but it appears reasonable to interpret this system by one of ordinary skill in the art as software per se.

Applicant's specification provides no explicit and deliberate definition of the components ("means") that make up the system other than they could be

software components, which are directed to functional descriptive material, per se, and are therefore non-statutory.

- Regarding claims 33 and 35 recite computer usable medium, which is disclosed as transmission media. The specification provides intrinsic evidence that the computer usable medium is intended to cover carrier waves, such are currently not believed to enable the computer usable medium to act as a computer hardware component and realize its functionality absent being claimed in combination with the necessary hardware to receive and convert the propagated signals to executable code.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 28 recites "the group" which is unclear to Examiner whether "the group" is referred to first group or second group. For examining purpose, Examiner assumes "the group" is the first group.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 18-31 and 34-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Alam et al. (United States Patent Application No.: US 2005/0160419 A1).

As per claims 18, 34 and 35:

Alam discloses:

- creating a first version of a shared file (see at least paragraph 17 **"there is a need to update or replace application 26 with update or new application" – the first version is the currently installed version that needs to update**);
- creating a second version of a shared file (see at least paragraph 17 **"there is a need to update or replace application 26 with update or new application" – update version is the second version**);
- creating a first private symbolic link to reference the first version of the shared file, the first private symbolic link only applying to members of a first group associated with the first private symbolic link (see at least paragraph 17 **"/project/subproject/"**); and
- creating a second private symbolic link to reference the second version of the shared file, the second private symbolic link only applying to members of a

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second group associated with the second private symbolic link (see at least paragraph 17 **"/project/subproject/VersionX+1"**).

As per claim 19:

Alam discloses:

- the first and second versions of the shared file are web pages (see at least paragraph 15 **"the application instance executing in server 16 will interact with a user via web pages. Typically, invocation of the application will result in an initial or "home" web page being sent to and displayed at the user's web browser"**).

As per claim 20:

Alam discloses:

- members of a first group are entities operating a first browser application and members of the second group are entities operating a second browser application (see at least paragraph 15 **"the application instance executing in server 16 will interact with a user via web pages. Typically, invocation of the application will result in an initial or "home" web page being sent to and displayed at the user's web browser"**).

As per claim 21:

Alam discloses:

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- which the first symbolic link has a link criteria that defines the membership of the members of the first group associated with the first symbolic link (see at least paragraph 17 **“/project/subproject/”**).

As per claim 22:

Alam discloses:

- the link criteria identifies a member to create a member private symbolic link (see at least paragraph 16 **“a user/client 30 can make a request via a network such as Internet 32 for application “project/subproject” by specifying URL...”**).

As per claim 23:

Alam discloses:

- the link criteria identifies an application version number link (see at least paragraph 17 **“/project/subproject/VersionX+1”**).

As per claim 24:

Alam discloses:

- the first group comprises multiple entities as members (**there are more than one users/clients**).

As per claim 25:

Alam discloses:

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- the first symbolic link provides a reference for a specific pathname (see at least paragraph 17 **"/project/subproject/"**).

As per claim 26:

Alam discloses:

- the first symbolic link provides a reference for a directory (see at least paragraph 17 **"/project/subproject/"**).

As per claim 27:

Alam discloses:

- the first private symbolic references a first private copy of the first version of the shared file (see at least paragraph 17 **"/project/subproject/"**) and the second private symbolic link references a second private copy of the second version of the shared file (see at least paragraph 17 **"/project/subproject/VersionX+1"**).

As per claim 28:

Alam discloses:

- wherein both the members of the first group and members of the group simultaneously operate different versions of the one or more shared files **(users/clients operate different version of applications)**.



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As per claim 29:

Alam discloses:

- one or more copies exist for each version of the one or more shared files (see at least paragraph 17 "**different versions of the same application**").

As per claim 30:

Alam discloses:

- creating a direct object reference for the members of the first group to the first version of the shared file (see at least paragraph 16 "**project/subproject/VersionX, where indicates the version number of the original application**").

As per claim 31:

Alam discloses:

- the direct object reference is automatically created by removing the first private symbolic link (**redirect the server to shared storage by removing/replacing the old symbolic link (/project/subproject/) with /project/subproject/VersionX+1**).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-17 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alam et al. (United States Patent Application No.: US 2005/0160419 A1), in view of Earl et al. (United States Patent No.: US 6,966,058 B2).

As per claims 1, 32 and 33:

Earl discloses:

- creating a second version of the shared file (see at least col. 5, line 34-35 **"a new software release 210 may be received by one of the SMS/boot servers 116..."**);
- bringing down a first member, wherein a second member is not brought down while the first member is down (see at least col. 2, line 39-41 **"performing the rolling upgrade process by sequentially loading and rebooting each of the plurality of nodes with the new software release"**); and
- bringing up the first member so that the first member references the second version of the shared file (see at least col. 2, line 39-41 **"performing the rolling upgrade process by sequentially loading and rebooting each of the plurality of nodes with the new software release"**).

Earl does not explicitly disclose:

- creating a private symbolic link for the first member to reference the second version of the shared file, the private symbolic link only applying to members of a

group associated with the private symbolic link, the group including less than all members in the computing system.

However, Alam discloses:

- creating a private symbolic link for the first member to reference the second version of the shared file, the private symbolic link only applying to members of a group associated with the private symbolic link, the group including less than all members in the computing system (see at least paragraph 17 **"To allow use of this updated or new application 47 Version X+1 during test, a symbolic link is written into local storage 49 of server 40 such that a call by server 40 for "/project/subproject/" in local storage 49 is changed to a call for "/project/subproject/VersionX+1" in shared storage 50")**).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Earl's approach to use symbolic link. One would have been motivated to use symbolic link in rolling software upgrade to redirect the request for software upgrade to a shared storage. In this manner, there is no need for a copy of software in the server's local storage (see at least paragraph 16 in Alam).

As per claim 2:

Earl discloses:

- bringing down the second member, wherein the first member is not brought down while the second member is down (see at least col. 2, line 39-41 **"performing**

**the rolling upgrade process by sequentially loading and rebooting each of the plurality of nodes with the new software release”); and**

- bringing up the second member (see at least col. 2, line 39-41 **“performing the rolling upgrade process by sequentially loading and rebooting each of the plurality of nodes with the new software release”**).

Neither Earl and Alam discloses:

- creating a second private symbolic link for the second member to reference the second version of the shared file.

However, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to recognize that Earl's approach is about rolling software upgrade and nodes are sequentially withdrawn from the system one by one for software upgrading. Therefore, one would have been motivated to create a second link for the second node to redirect the new version to the shared storage in order to fulfill the purpose of rolling software upgrade.

As per claim 3:

- the private symbolic link and the second symbolic link are the same, and wherein both the first and second members are members of the group associated with the private symbolic link **(It is inherent in order to perform rolling software upgrade)**.

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As per claim 4:

Alam discloses:

- removing the first version of the shared file (**replacing VersionX with VersionX+1**).

As per claim 5:

Neither Earl or Alam disclose:

- the private symbolic link for the first member references a first private copy of the second version of the shared file and the second private symbolic link for the second member references a second private copy of the second version of the shared file.

However, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to recognize that the combination of Earl and Alam's approaches set forth in claim 1 and 2 teach the cited limitation.

As per claim 6:

Neither Earl or Alam disclose:

- the private symbolic link for the first member and the second private symbolic link for the second member references the same copy of the second version of the shared file.

However, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to recognize that the combination of Earl and Alam's approaches set forth in claim 1 and 2 teach the cited limitation.

As per claim 7:

Earl discloses:

- bringing down the second member, wherein the first member is not brought down while the second member is down (see at least col. 2, line 39-41 "**performing the rolling upgrade process by sequentially loading and rebooting each of the plurality of nodes with the new software release**"); and
- bringing up the second member so that the second member references the third version of the shared file, wherein both the first member and the second member simultaneously operate different versions in the computing system (see at least col. 2, line 39-41 "**performing the rolling upgrade process by sequentially loading and rebooting each of the plurality of nodes with the new software release**").

Earl does not explicitly disclose:

- creating a second private symbolic link for the second member to reference a third version of the shared file.

However, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to recognize that Earl's approach is about rolling software upgrade that nodes are sequentially withdrawn from the system one by one for software

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upgrading. Therefore, one would have been motivated to create a second link for the second node to redirect the new version to the shared storage in order to fulfill the purpose of rolling software upgrade.

As per claim 8:

Alam discloses:

- one or more copies exist for each version of the computer application (see at least paragraph 16 "**different versions of the same application...**").

As per claim 9:

Alam discloses:

- the private symbolic link comprises a property that identifies a link criteria (see at least paragraph 16 "**Server16.IBM/project/subproject/VersionX**").

As per claim 10:

Alam discloses:

- the link criteria comprises a member identifier (see at least paragraph 16 "**Server16.IBM/project/subproject/VersionX** - where "**Server16**" in the URL represents the real name or IP address of server 16").

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As per claim 11:

Alam discloses:

- creating a direct object reference for the first member to the second version of the shared file (see at least paragraph 16 “**project/subproject/VersionX, where indicates the version number of the original application**”).

As per claim 12:

Alam discloses:

- the direct object reference is automatically created by removing the private symbolic link (**redirect the server to shared storage by removing/replacing the old symbolic link (/project/subproject/) with /project/subproject/VersionX+1**).

As per claim 13:

Earl discloses:

- bringing down the second member, wherein the first member is not brought down while the second member is down (see at least col. 2, line 39-41 “**performing the rolling upgrade process by sequentially loading and rebooting each of the plurality of nodes with the new software release**”); and
- bringing up the second member (see at least col. 2, line 39-41 “**performing the rolling upgrade process by sequentially loading and rebooting each of the plurality of nodes with the new software release**”).



Earl does not explicitly disclose:

- creating a third version of the shared file; and
- creating a second private symbolic link for the second member to reference the third version of the shared file.

However Alam discloses:

- creating a third version of the shared file (see at least paragraph 17 **"VersionX+1"**);
- creating a second private symbolic link for the second member to reference the third version of the shared file (see at least paragraph 17 **"project/subproject/VersionX+1"**); and

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Earl's approach to use symbolic link. One would have been motivated to use symbolic link in rolling software upgrade to redirect the request for software upgrade to a shared storage. In this manner, there is no need for a copy of software in the server's local storage (see at least paragraph 16 in Alam).

As per claim 14:

Earl discloses:

- copying the shared file (see at least col. 6, line **"copying the software from the first machine on which it is installed to the others"**); and
- patching the shared file to create the second version (see at least col. 6, line 19-20 **"new software releases, which may include software patches..."**).

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As per claim 15:

Alam discloses:

- the private symbolic link is private to a member (**the symbolic link is private for members**).

As per claim 16:

Earl discloses:

- the act of bringing down the first member comprises:
  - o shutting down a computer application at a node associated with the first member (see at least col. 2, line 39-41 "**performing the rolling upgrade process by sequentially loading and rebooting each of the plurality of nodes with the new software release**").

As per claim 17:

Earl discloses:

- the first member still executes the first version of the computer application concurrently with the second member executing the new version of the computer application (see at least col. 2, line 39-41 "**performing the rolling upgrade process by sequentially loading and rebooting each of the plurality of nodes with the new software release**").

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- McIntyre (United States Patent No.: US 6,178,546 B1)
- Lucas et al. (United States Patent No.: US 6,725, 453 B1).
- Costello et al. (United States Patent No.: US 6,950,833).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip H. Nguyen whose telephone number is (571) 270-1070. The examiner can normally be reached on Monday - Thursday 10:00 AM - 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PN  
5/11/2007

  
WEI ZHEN  
SUPERVISORY PATENT EXAMINER